

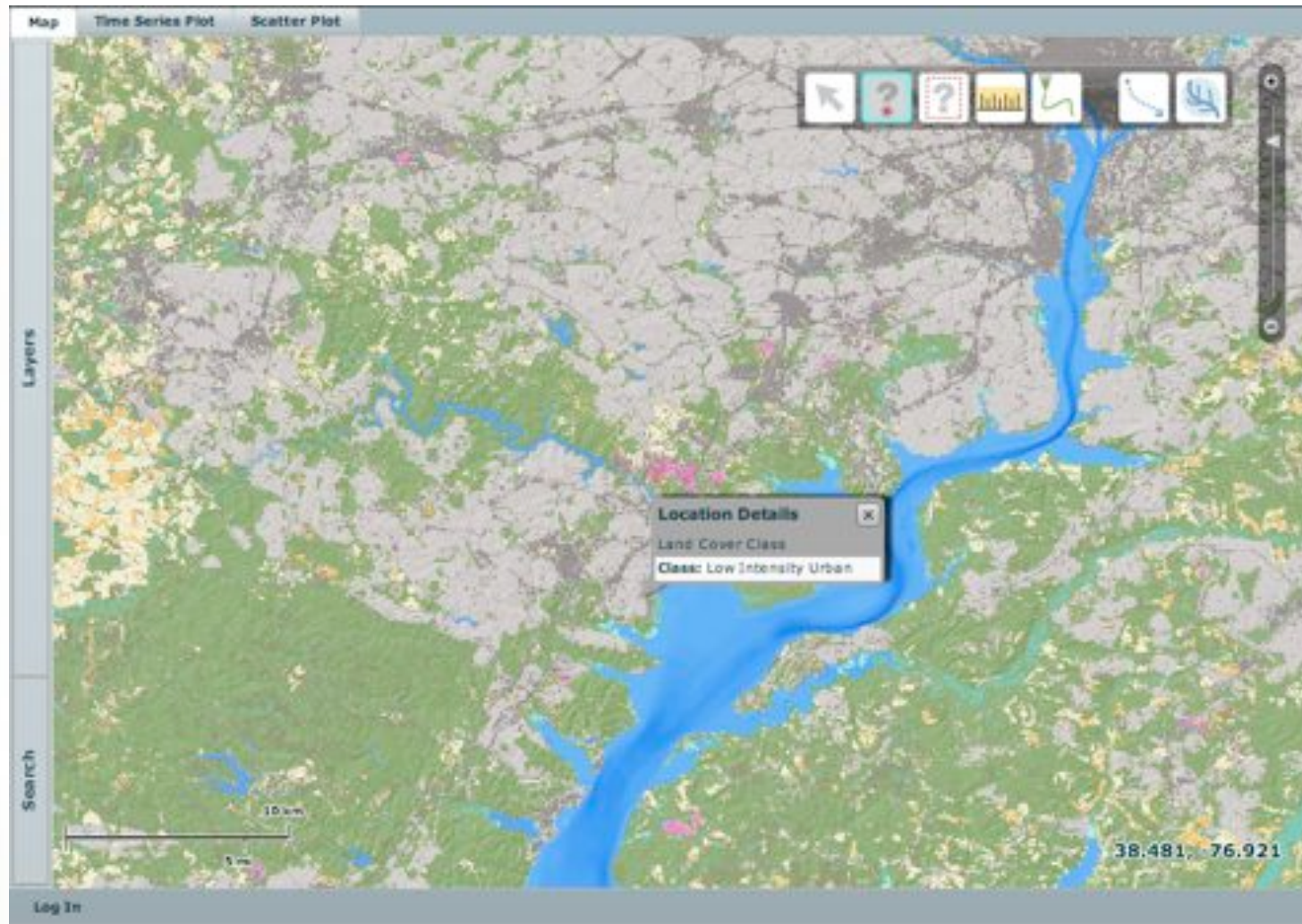
# Geographic Analysis of Data With National Geographic FieldScope



# What is NG FieldScope?

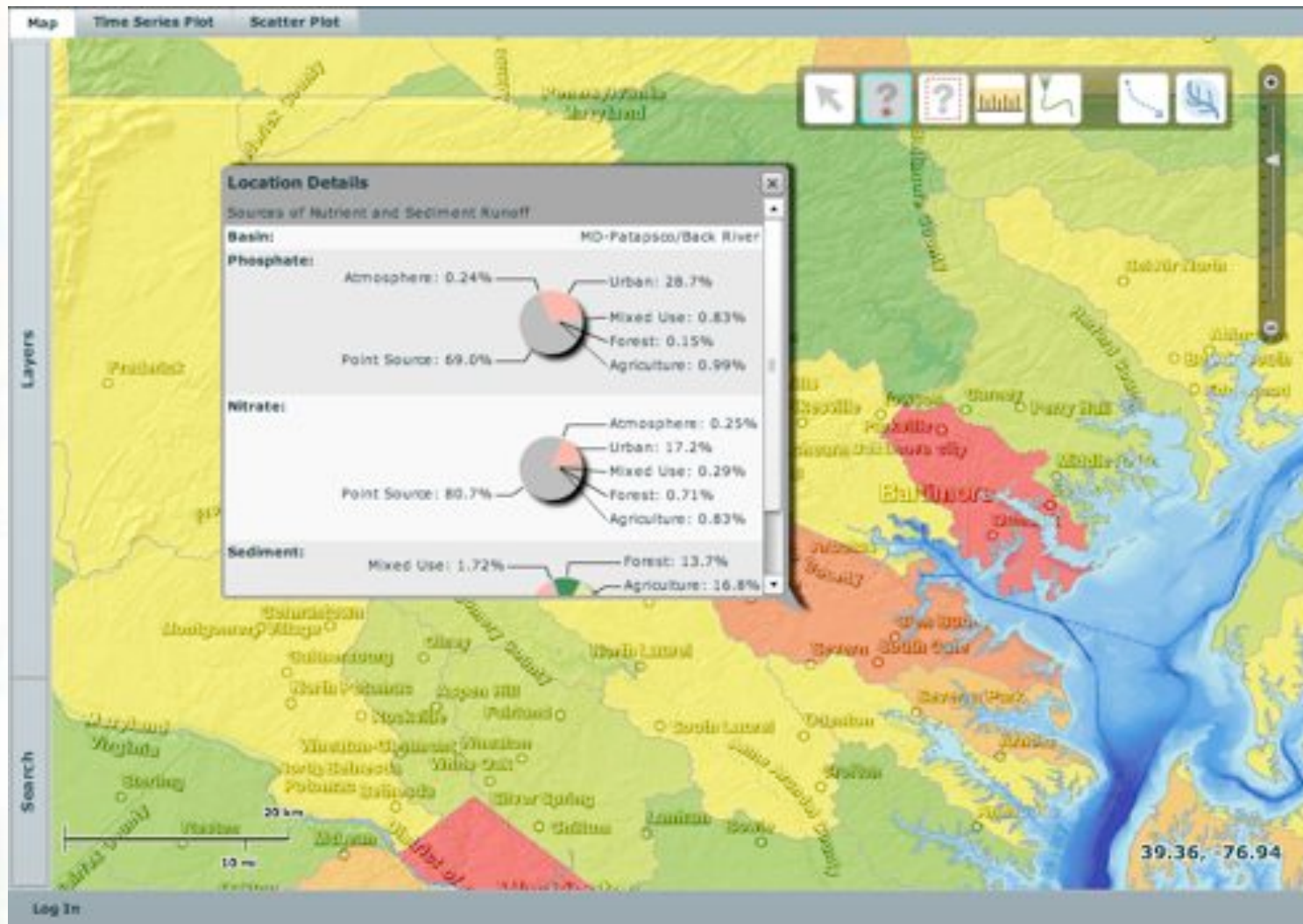
- Web based GIS tool
- Customized for student use
- Focus on mapping, data collection, and analysis
- Combination of user-generated and **professionally collected** data

# Mapping: Point Query GIS Data

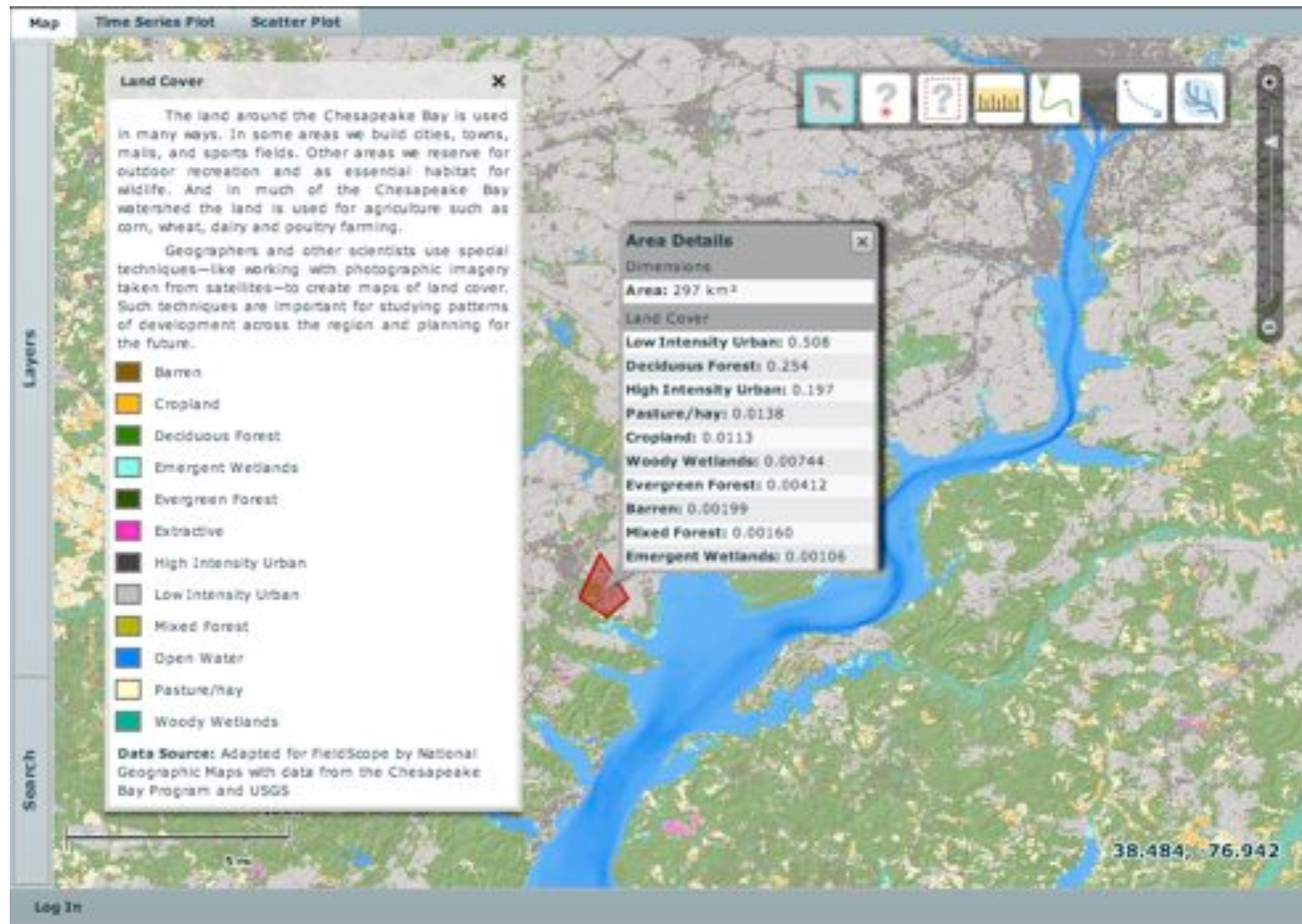




# Mapping: Complex Point Query

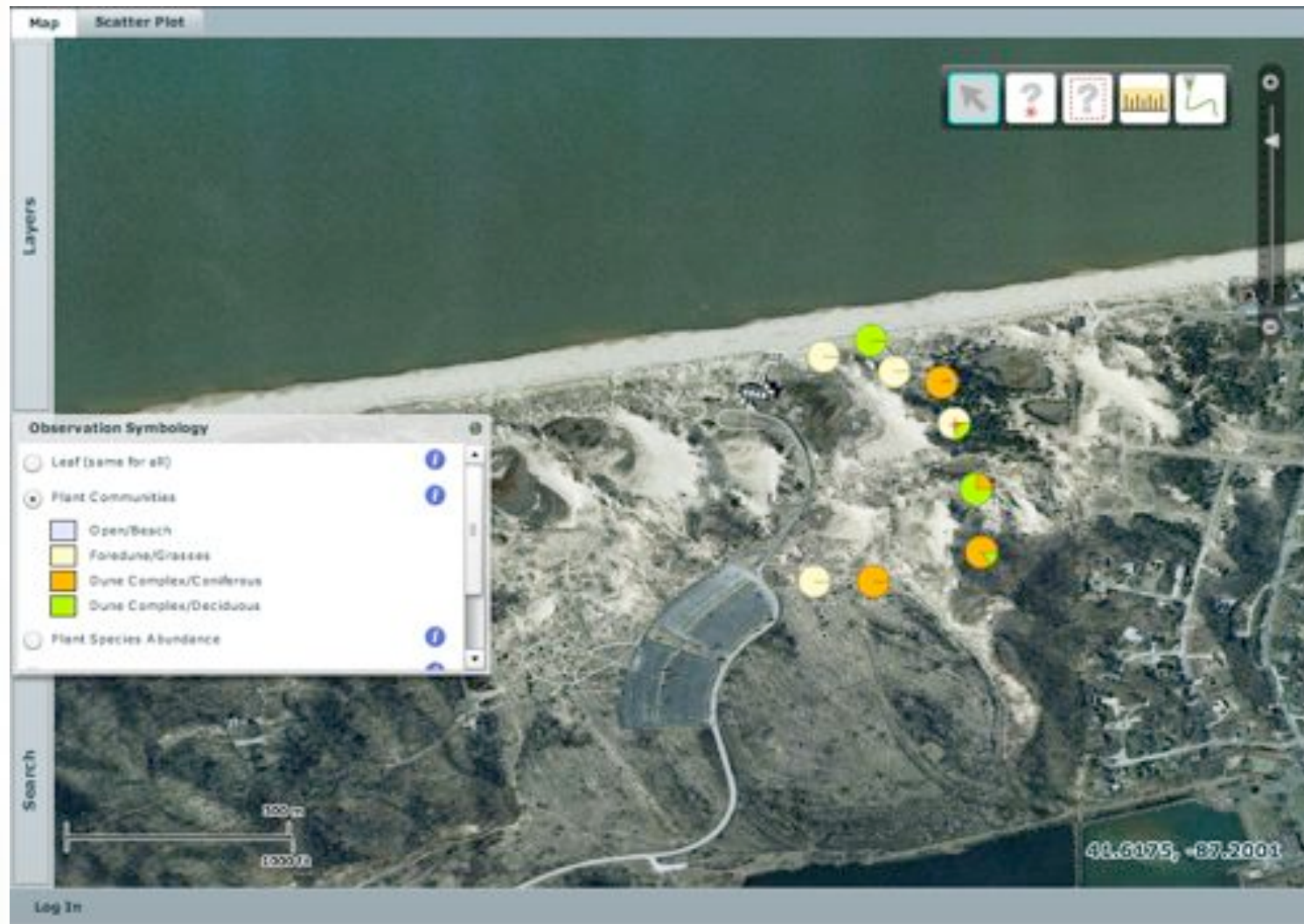


# Mapping: Polygon Query GIS Data

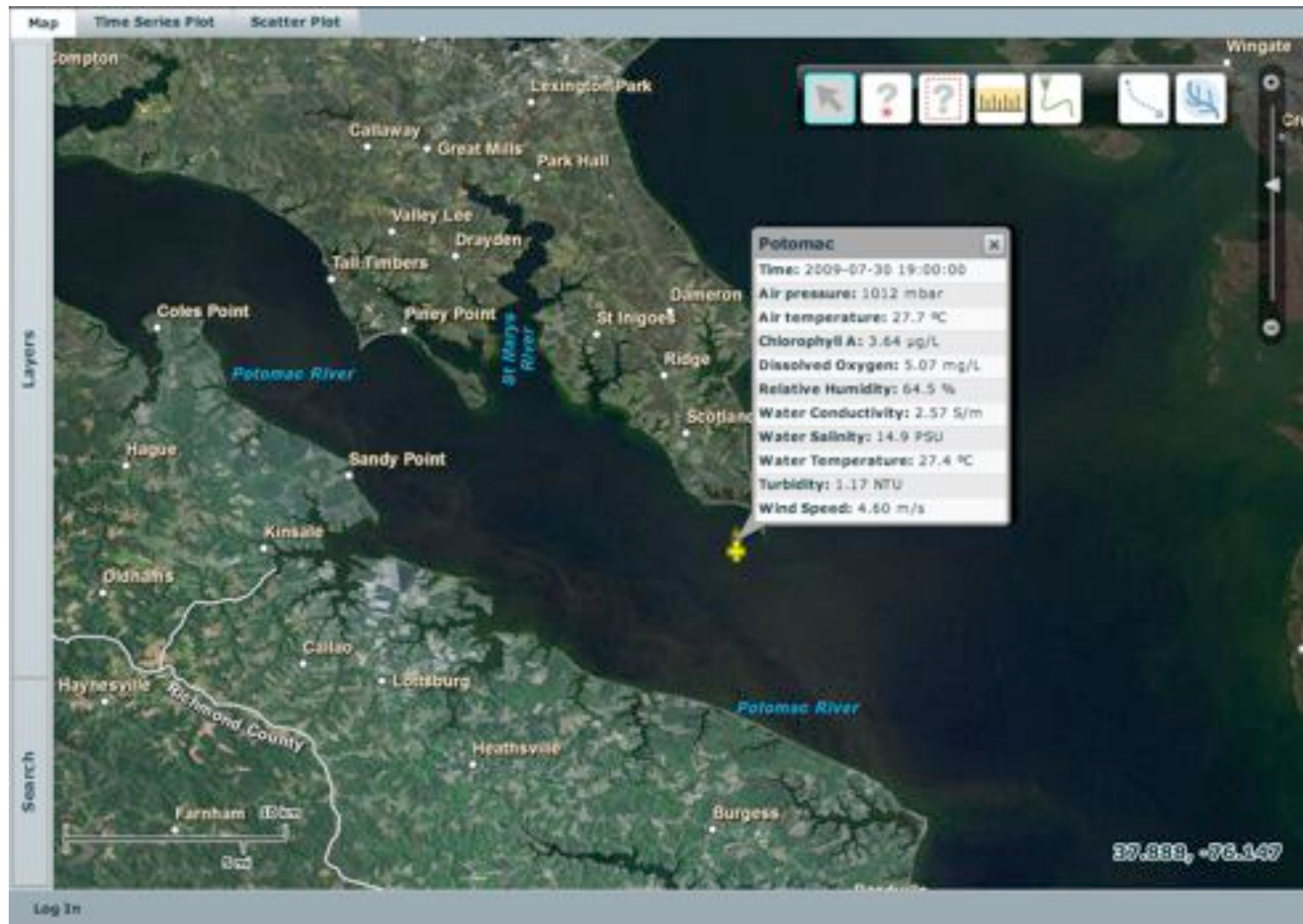




# Mapping: Point Symbolology

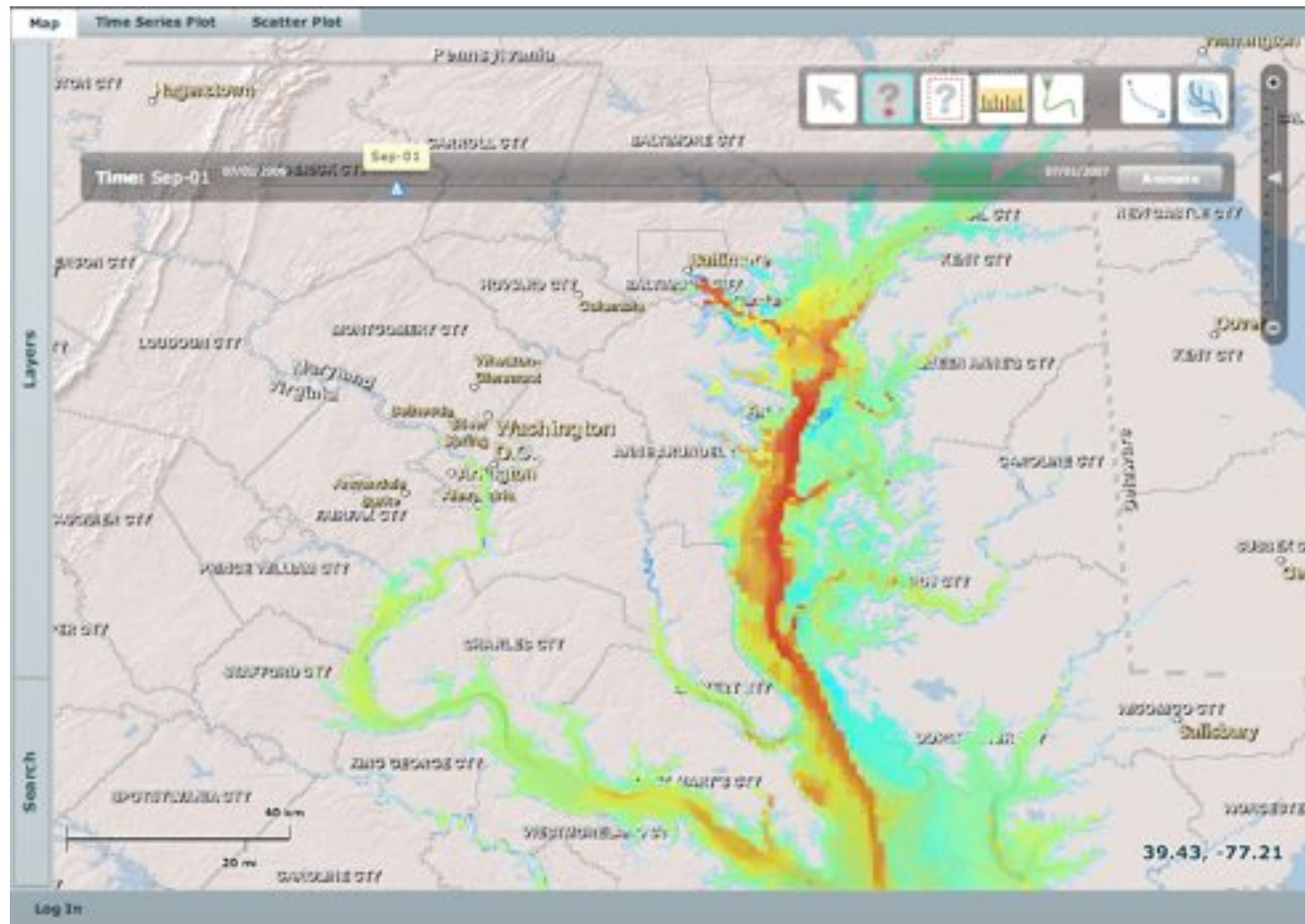


# Mapping: Real-Time Data



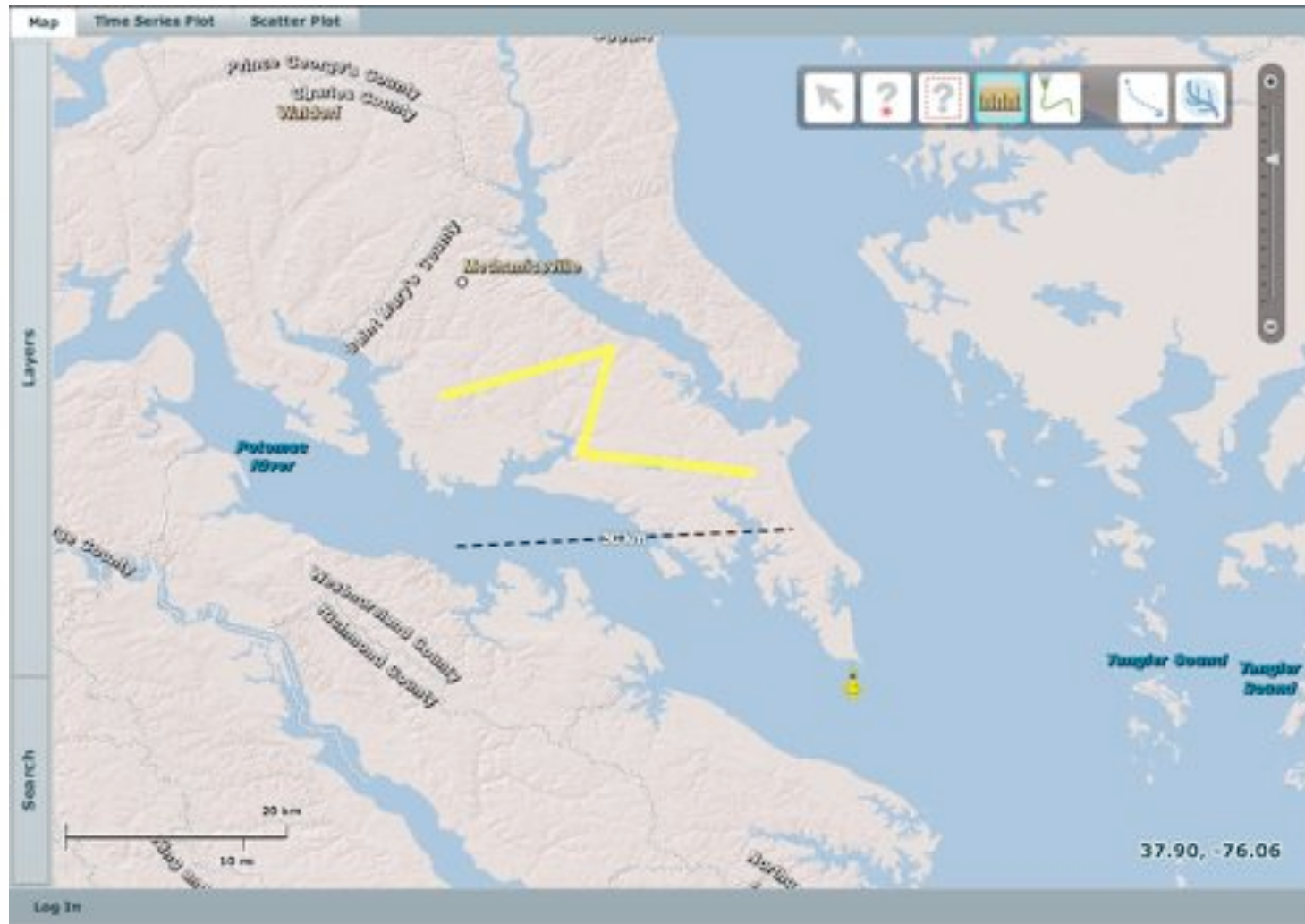


# Mapping: Time Series Data





# Mapping: Drawing & Measuring



# Data Collection: Observations

The screenshot shows a web-based data collection interface. The main map displays a river system with several observation points marked by red pins. A sidebar on the left contains a 'Layers' panel and a 'Search' bar. The top navigation bar includes tabs for 'Map', 'Time Series Plot', and 'Scatter Plot'. A toolbar with various icons is located above the map. A 'Study Observation 256' window is open, displaying the following data:

- Latitude: 38.9 deg
- Longitude: -76.1 deg
- Location Name: Pickering Creek
- Organization: Pickering Creek Audubon Center
- Collected: 2009-03-06 11:00:00 AM
- Entered: 2009-05
- Field Notes: PCAC
- Water Temperature: [blank]
- Secchi Depth: 15
- Dissolved Oxygen: [blank]
- Nitrate: 1 mg/L
- pH: 8

An 'Enter Observation' window is also open, showing a form for 'Location Details' with the following fields:

- Location Name: Pickering Creek
- Latitude: 38.868542801038 deg
- Longitude: -76.1532274246218 deg
- Collected: 07/06/2009 1:00 AM
- Organization: Pickering Creek Audubon Center
- Field Notes: [text area]

The bottom of the interface shows a status bar with 'Logged in as russell', 'Log Out', 'Manage Users...', 'User Settings...', 'Feedback...', and 'Save Map...'. The coordinates '38.32, -74.51' are displayed in the bottom right corner.



# Data Collection: Pictures

Map Time Series Plot Scatter Plot

Layers Search

Runoff after Spring Storm

This image shows the amount of debris washed out of the Patuxent River watershed during a big spring rain.

Click to enlarge

Upload Photo

File:  No File Selected

Latitude:

Longitude:

Photo Caption:

Photo Description:

Keywords:

☐ Point Source ☐ Non-point Source ☐ Degraded Ecosystem

☐ Healthy Ecosystem ☐ Algal Bloom ☐ Erosion ☐ Wetlands

☐ Riparian Buffer ☐ Plant Species ☐ Animal Species

☐ Other:

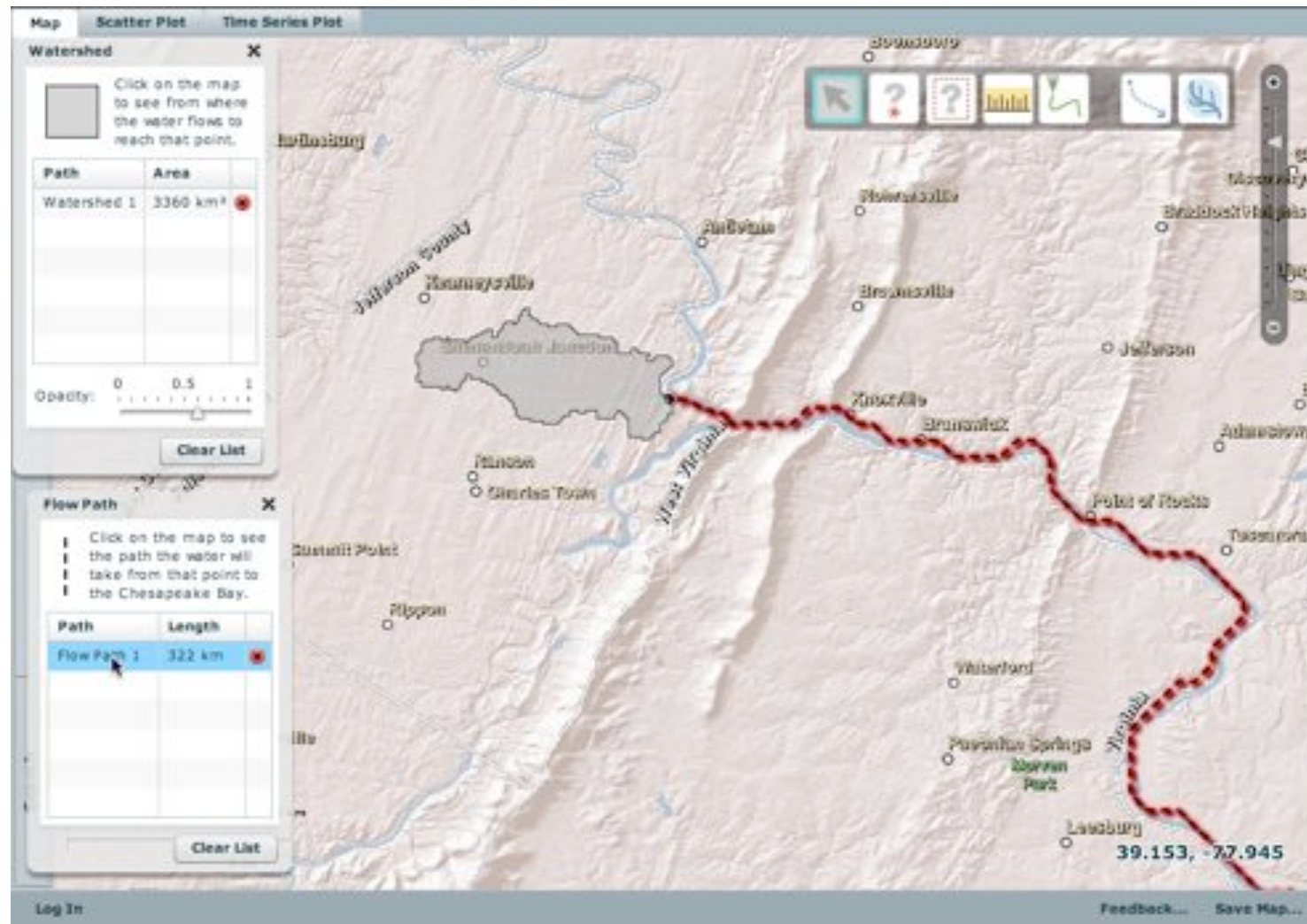
40 km 30 mi

37.70, -74.65

Logged in as russell Log Out

Manage Users... User Settings... Feedback... Save Map...

# Analysis: Geoprocessing

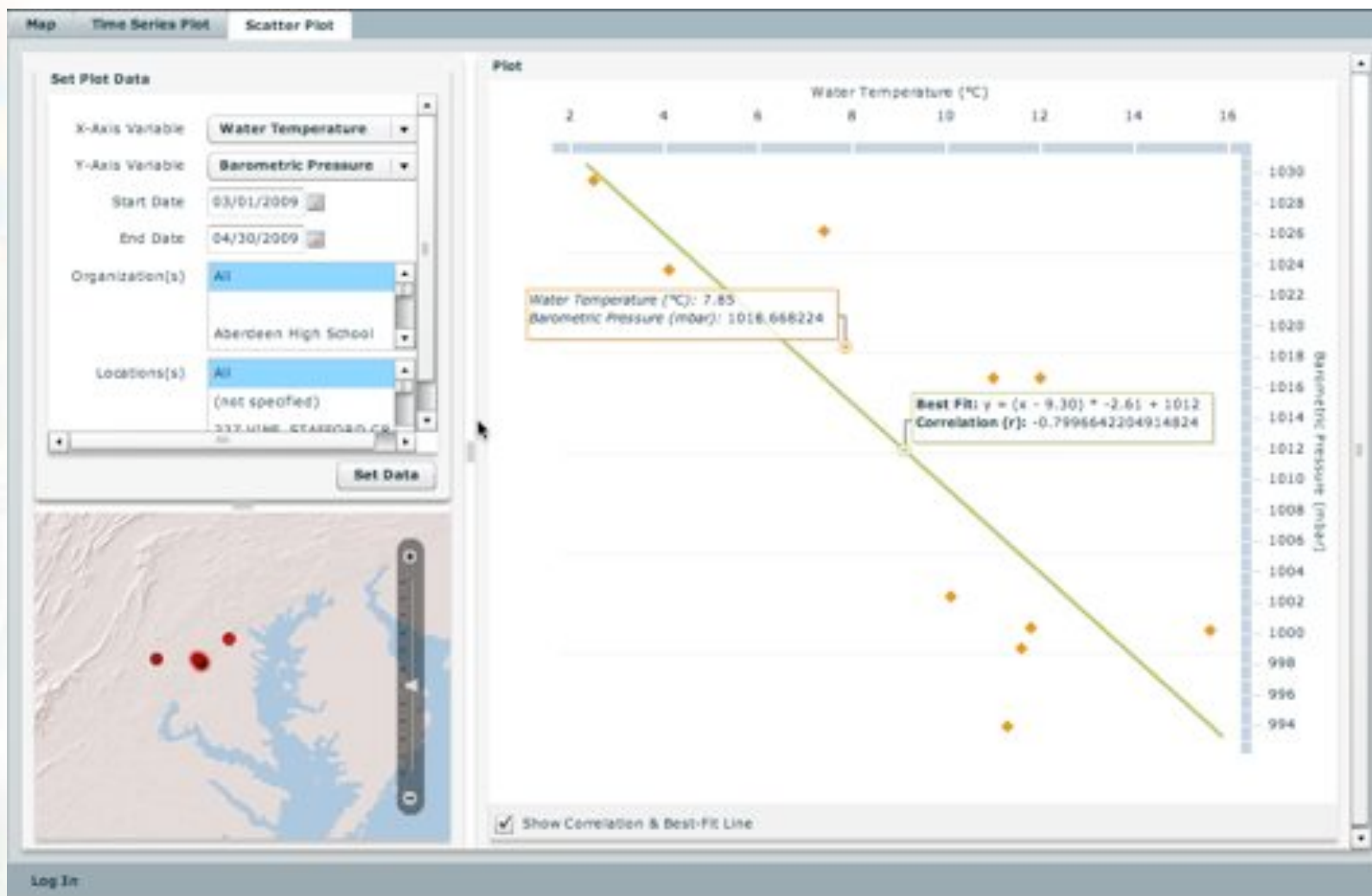




# Analysis: Time Series Plot



# Analysis: Scatter Plot







# What's Next for FieldScope?

- Side-by-side Map Comparison
- Better time-series analysis
- Interface to server-side modeling
- Access to more long-term datasets via web services
  - NWIS stream discharge
  - World Monthly Surface Station Climatology



# Long Term Plans

- Community Tools
  - Sharing maps and data across classrooms and schools
  - Building communities around location, or around similar activities in different locations
  - 6mo-1yr out
- Instance Creation Tools
  - Enable users to create their own instance of FieldScope, (almost) as easily as creating a Google group (for example)
  - 3yr-5yrs out



# More Information

- [www.fieldscope.us](http://www.fieldscope.us)
- Anyone can see and analyze data as a guest. To upload data, click “login” and “new user” to request a login. You will be asked about your school name and how you learned about the project.
- For more information, contact Kathleen Schwille [kschwill@ngs.org](mailto:kschwill@ngs.org) or Eric Russell [erussell@ngs.org](mailto:erussell@ngs.org)



# Pilot Partners



Educators in Maryland, Virginia, and Washington, DC



**Thinkfinity.org**  
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# Technical Data

- ESRI ArcGIS Server 9.3
  - ArcGIS Flex API 1.2
- WebORB RPC Server
  - MS SQL Server 2008
- MS ASP.Net